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From: Backer, Dana
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Subject: Lessons Learned as a result of NAU project "Integration of historical and contemporary data"
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NAU PHASE One project wrapup_11.16.17v2.docx

Hi All,
NAU was funded to evaluate and compare historical and contemporary data to inform assessment, monitoring and decision making at the monument. For a wide variety of reasons, the project was substantially delayed and results were slim. However, Kevin Miller (project lead at the time), felt that there were lessons learned by the range staff during the project. Thus, a meeting was held to discuss these lessons and they will be incorporated into the final NAU report.

I have attached the meeting notes. I am cc the management team because there three critical needs that came out of our discussion. One, the need to have data analyzed. Two, the need for a spatial geodatabase for rangeland data (sans AIM data). And finally, an integrated monitoring plan to reduce redundancies and improve logistics. I would be happy to talk to MLT to discuss each of these needs.

Please let me know if I missed anything in the notes.
Thanks
Dana

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Lessons Learned for Rangeland Monitoring Project (NAU PHASE One project wrap-up 11/16/17)

Participants: Jason, Sean, Allan, Raymond, Ken, Dana, Kevin Miller

Needs and future directions (from report pg 25)

For the analyses and summaries described in this report, several potentially valuable datasets -- notably the trend and utilization data, and miscellaneous treatment success monitoring data -- were not taken into consideration. Additionally, the information required to bring the integrated data into an analysis phase has not yet been developed. We also recommend the following…

- Dates need to be added to all datasets
- Quantitative raw data needs to be entered and joined to spatial data. The majority of the legacy data was collected as qualitative data, however, there was some quantitative data that was originally measured to derive these qualitative classifications. The inclusion of the quantitative data will allow for better data integration and comparisons across legacy and contemporary data sets.
- Complete data entry for the other legacy data sets, such as the range improvement trend data
- Because indicators are measured at different spatial scales, there is a need to map metrics (and therefore land health standards) to a consistent measurement unit.

DATA ANALYSES

Understand the importance of the data analyses. Find a way to make analyses more straight forward (Excel) and how to interpret the data. VGS data base summarizes “Trend Data” by allotment. Refer to Utah Monitoring Manual for Upland Rangelands or Monitoring Plant and Animal Populations (Elzinga et al).

Ways to use the data collected to inform future decisions, support NEPA and proposals, reporting, permit renewal, Assessment Reports, etc.

GEODATABASE

Legacy data would be of greater value if it was in a spatial geodatabase. Need to develop a process and LT procedure for taking legacy data and putting it into a GEODATABASE. A GDB would stream line and support easier retrieval, analyses, queries. Requires time and skill

Note: Each BLM office got to pick their monitoring methods therefore no top down system for putting data into system and writing formulas for analyzing –not until AIM. BLM is starting to centralize PFC data.

INTEGRATED MONUMENT MONITORING PROGRAM

AIM will not and can not replace traditional monitoring because so many other project specific monitoring needs. Most of the legacy data is non-probabilistic monitoring (traditional data) and it has some value in looking at trends over time.

Some of the challenges currently face is the amount of time everything takes because of the size of the monument and the logistics involved. Potentially integrate monitoring such as what has been done the past two years where archeological clearance for AIM was done at same time as AIM monitoring (have arch qualified person on the crew). Co-locate monitoring (trend x AIM x climate stations x other) so can take advantage of working in a given area.

Most common monitoring at GSENM is the BLM Utah state monitoring methods (Nested Frequency which includes line point intercept, frequency, and nested frequency the e– called Trends Monitoring; currently in Excel); continue these protocols so have a long-term look at vegetation change.

Have not resolved with State office if AIM can replace other forms of monitoring or integrate them so don't have duplicate data collection. Casey Adds, state lead on all monitoring not just AIM.

Other Notes (not to be added to the NAU report)

Someone was going to look at what GDB frameworks are currently available or other systems that could help integrate data.

Spatial integrate trend, AIM and other data into GDB - Norman for trend and restoration,

Sherm Karl (NOC) is someone you ought to know: he's a rangeland ecologist who has worked for BLM for many years, and may have the best big-picture/long-term understanding of BLM's range program of anyone (he's listed in Google Contacts as Michael Karl, but he goes by Sherm: mkarl@blm.gov (303) 236-0166).

Allan Bass State Lead for Range

Assessment Reports are to be done before permit renewal. No longer doing them. They gather all data from all sources by allotment (third party data?). Crosswalk and evaluate the different data sets.

Talk with MLT about – develop a process and LT procedure for taking legacy data and putting it into a GEODATABASE.

(Kevin Miller) The NAU report compared both PFC and IIRH data (from the early 2000s) with AIM data .I believe comparisons among those IIRH and PFC data were made previously, but I'm not sure by whom or whether they were published. Mark wrote a summary of the IIRH project (from the early 2000s) in a paper published in Rangeland Ecology and Management (Miller, Mark E. 2008. Broad-scale assessment of rangeland health, Grand Staircase-Escalante National Monument, USA. Rangeland Ecology and Management 61(3):249-262). It does not discuss PFC data, although they were collected at the time and there are summary Excel files

in the old EIS folder on the shared drive (see the folder named "Tables Data and Databases"); there might be something there. Z:\NEPA\Livestock_Management_Plan\2008_Grazing_EIS.